

WHAT IS CLAIMED IS:

1. An optical film structure disposed on a light transmission surface of an illumination unit, for modulating light emitted from said illumination unit and projecting modulated light, comprising:
- 5 at least one optical film;
at least four optical film fixing parts disposed at an outer peripheral portion of said optical film;
- 10 a film tension controlling member attached at one of the ends thereof to each of said film fixing parts in such a fashion as to be capable of pulling said optical film under tension while maintaining flatness of said optical film; and
a film fixing frame for fixing said optical film, connected to the other end of said film tension controlling member;
- 15 wherein said optical film, said film tension controlling member and said film fixing frame are integrated with one another and are constituted into one component.
2. An optical film structure as defined in claim 1, wherein said optical film is a member selected from the group consisting of a light diffusion film, a light reflection film, a luminance improving film, a polarization film and a multifunctional optical film having at least two performances of said films.
- 20 3. An optical film structure as defined in claim 1 or 2, wherein said film tension controlling member is formed of an elastic material.
- 25 4. An optical film structure as defined in claim 3, wherein said elastic material is a spring or rubber.
5. An optical film structure as defined in any one of claims 1 to 4, wherein said

at least two of said optical films are stacked with or without a gap between them.

6. An optical film structure as defined in any one of claims 1 to 5, which is used between a liquid crystal display unit and an illumination unit in a liquid crystal display device.

7. An illumination apparatus comprising:
an illumination unit at least including at least one light source and a light transmission surface for guiding outward the rays of light from said light source; and
an optical film structure as defined in any one of claims 1 to 5 that is arranged on said light transmission surface of said illumination unit.

8. An illumination apparatus as defined in claim 7, which is used as a backlight illumination unit on the back surface of a liquid crystal display device.

9. A liquid crystal display device comprising:
an illumination unit at least including at least one light source and a light transmission surface for guiding outward the rays of light from said light source;
an optical film structure as defined in any one of claims 1 to 5 that is arranged on said light transmission surface of said illumination unit; and
a liquid crystal display unit arranged on said optical film structure.

10. A liquid crystal display device as defined in claim 9, wherein said illumination unit is a backlight illumination unit.